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Chest physiotherapy adherence in cystic fibrosis Brazilian patients

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Aim: The aim of our study was to evaluate the adherence of patients to CPT and its correlation to severity of the disease, social-economic status and clinical data in CF patients. **Methods**: A transversal clinical study including 84 patients (43male) from the population treated at the University Hospital was performed. The patients completed a questionnaire to evaluate social-economic status, clinical data and CPT adherence. A Shwachmann score (SS) was assigned to each patient as a measure of disease severity. The Fisher and Kruskal-Wallis tests were used to compare CPT adherence with all variables. **Results**: Patient's age ranged from five months to 29 years (8.63±6.42). SS classified the patient's condition in excellent/good (44%), mild (33.3%) and moderate/severe (22.6%). CPT was performed in 83.3% of patients and satisfactory adherence was verified in 59.5%. **Conclusion**: A statistical association could be demonstrated between CPT adherence and number of family members, family income, mother's schooling, age, gender and number of annual consultations. There was no statistical association between CPT adherence and disease severity, father's schooling, number of rooms in the house, origin and diagnosis period.

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Exercise capacity and lung function after home IV antibiotics in children

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In an effort to decrease the impact of chronic illness on the lives of people with CF, the use of home IV antibiotics (home IV) has increased recently. Previous studies comparing home to hospital based therapy have shown varying outcomes in terms of benefit accrued.

We aimed to assess the outcome of a course of home IV in terms of exercise capacity and lung function in a group of children with CF.

Data was collected prospectively from 10 children (7 male) undergoing home IV, and 10 clinically stable children (3 male). Both groups completed the Modified Shuttle Test (MST) and lung function according to standard protocols. Tests were performed– prior to and at completion of home IV for the treatment group (TG) (mean 14 ± 0 days), and a mean (SEM) 13.9 ± 0.3 days apart for the control group (CG).

TG: FEV_1 increased by mean 6.6 %pred ($p \leq 0.05$) from a baseline of mean 62.0 %pred (±5.3). There was a non-significant improvement in MST distance of 30m ($p=0.46$) from mean distance at initiation of 778m (±69).

CG: There were small non-significant declines in all parameters measured for the control group. Mean FEV_1 was 71.1% pred at baseline (±4.6) and 67.4 %pred (±5.3) two weeks later. MST distance similarly decreased by mean a 56m from 836 (±66) to 780m (±87).

There were no significant correlations between MST distance and FEV_1 %pred at baseline or 14 days for either group. There was, however, a correlation in change in FEV_1 and change in MST distance in the group receiving home IV.

This study has demonstrated a small but significant improvement in lung function but no significant difference in exercise capacity following a course of home IV in children with CF. The improvement seen here is not as great as previously reported by our group for those receiving in-hospital IV therapy.